

Figure 1A

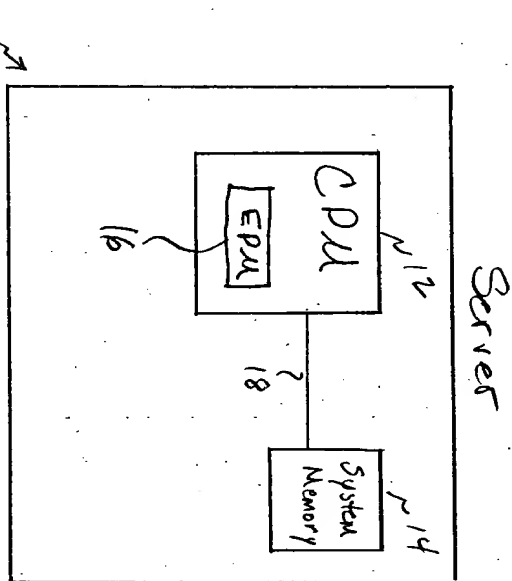


Figure 1B

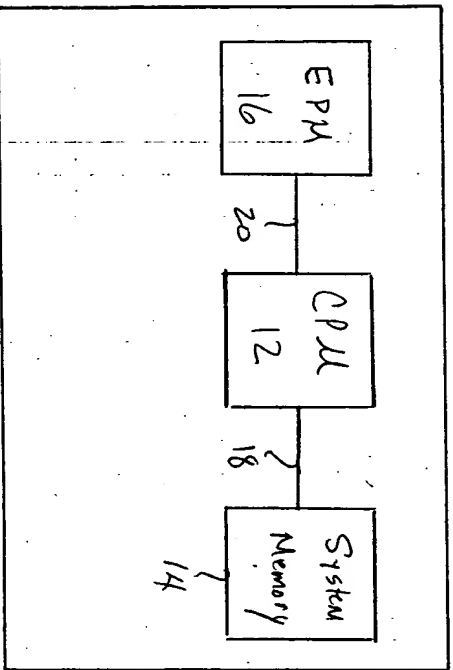
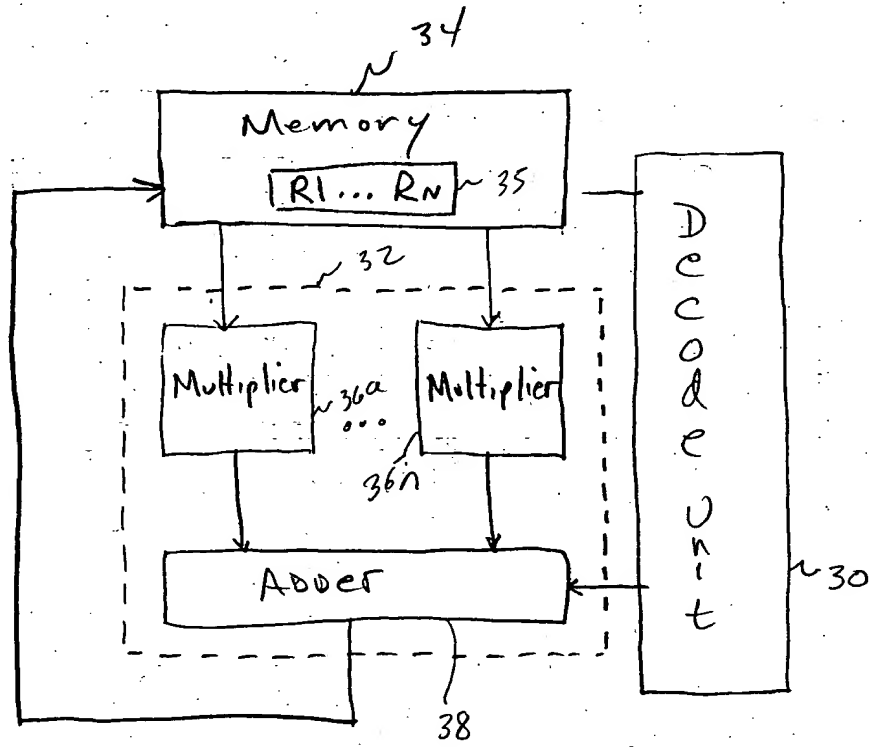


Figure 1C



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Figure 2

Product Operation

a, a0
b, b0

22-141 50 SHEETS
22-142 100 SHEETS
22-144 200 SHEETS



Instruction

Description

Cycle One

mult R1 a, b, a0 b0

a, b, and a0 b0 are simultaneously multiplied and the result is stored in Register R1.

Cycle Two

MAC R2 a, b0, R1

a, b0 are multiplied and the product is added with the contents of R1 and stored in R2.

Cycle Three

MAC R3, b, a, R2

a, b are multiplied and the product is added with the contents of R2 and stored in R3.

Figure 3

Square Operation

$a_1 a_0$

$a_1 a_0$

$a_1 a_1 \ a_0 a_0$

$2a_1 a_0$

Instruction

Description

Cycle One

MULT R1, $a_1 a_1$, $a_0 a_0$

$a_1 a_1$ and $a_0 a_0$ are multiplied and stored in Register R1

Cycle Two

MAC 2X R2 ($a_1 a_0$), R1

$a_1 a_0$ are multiplied and shifted by one and then added to the contents of R1. The result is stored in R2

Figure 4

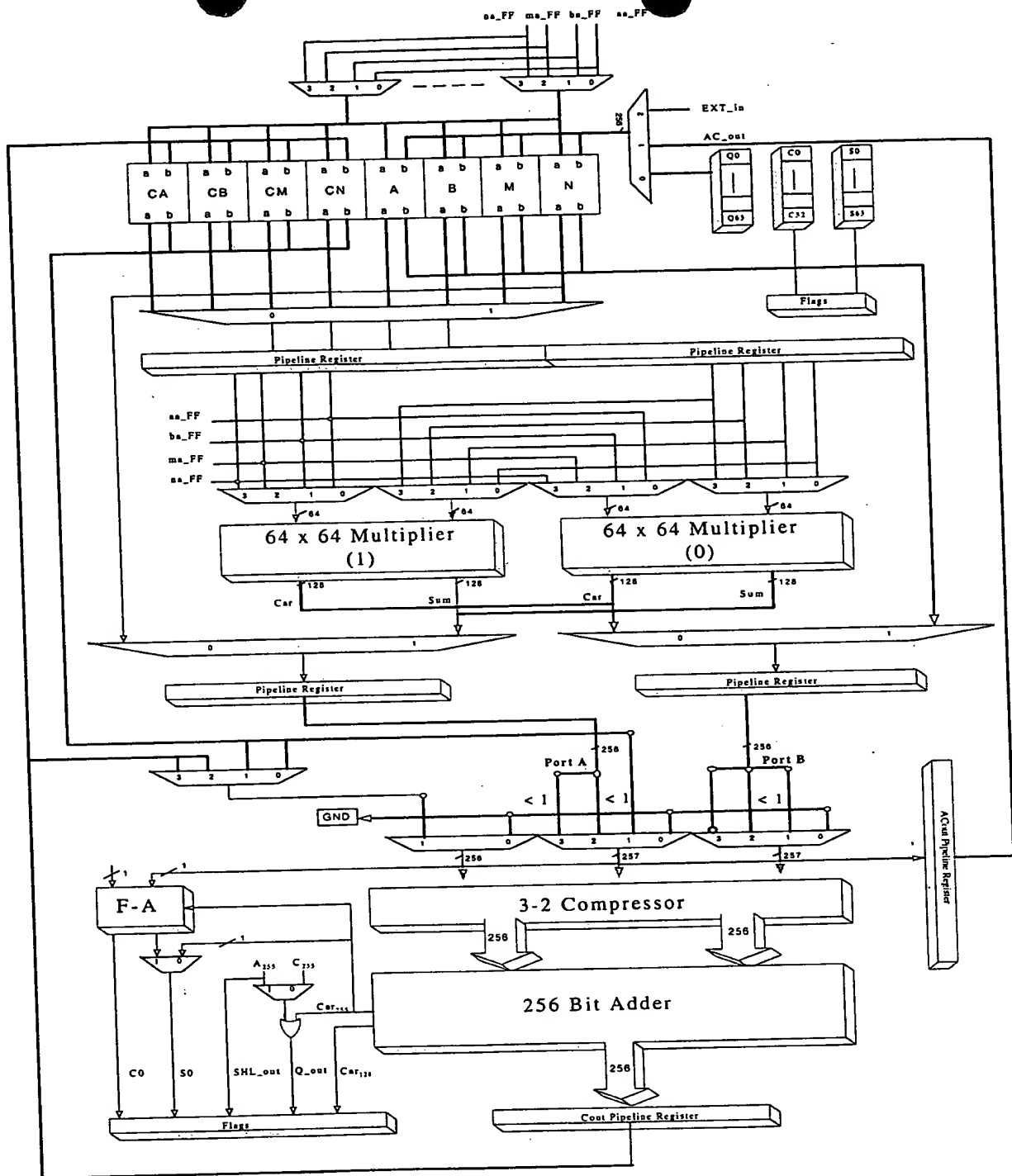


Figure 5